



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,017	06/25/2001	Eiichiro Ikeda	1232-4727	9400
27123	7590	02/08/2006	EXAMINER	
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			NGUYEN, LUONG TRUNG	
			ART UNIT	PAPER NUMBER
			2612	

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/891,017

Applicant(s)

IKEDA ET AL.

Examiner

LUONG T. NGUYEN

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-78 is/are pending in the application.
- 4a) Of the above claim(s) 8-36, 44-72, 74, 75, 77 and 78 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 37, 38, 73 and 76 is/are rejected.
- 7) ☒ Claim(s) 3-7 and 39-43 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                         |                                                                             |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                                |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____                                                             | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. Claims 8-36, 42-71, 74-75, 77-78 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 4/14/2005.

#### ***Response to Arguments***

2. Applicant's arguments, see Amendment, filed on 11/14/2005, with respect to claims 1, 37, 73, 76 have been fully considered and are persuasive. The non-final rejection as made on 8/12/2005 has been withdrawn. A replacement non-final sets forth below.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 37, 73, 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sorimachi (US 5,331,442) in view of Morgana (US 6,377,711) further in view of Hieda (US 5,471,241).

Regarding claim 1, Sorimachi discloses a signal processing apparatus for processing an image signal comprising:

Art Unit: 2612

a hue difference detector (hue detection circuit 35, figure 12, column 2, lines 12-20)

luminance edge enhancement means for enhancing an edge pixel in an image on the basis of the hue difference detected by said hue difference detector (edge enhancement LUT 38 performs an edge enhancement process on the image signal on the basis of hue signal detected by hue detection circuit 35, figure 12, column 2, lines 1-20).

Sorimachi fails to specifically disclose detecting a hue difference between adjoining pixels. However, Morgana teaches a system for detecting edges by selecting each pixel and comparing the hue of the pixel with neighboring pixels (figures 5, 10, column 3, lines 5-12, column 6, lines 20-47). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Sorimachi by the teaching of Morgana in order to provide a system which performs edge detecting routines much faster than the conventional edge detecting approaches (column 2, lines 32-35).

Sorimachi and Morgana fail to specifically disclose enhancing an edge pixel in an image by amplifying an edge luminance signal by a gain. However, Hieda teaches that for the setting of the amounts of emphasis of horizontal and vertical edges, the optimum amounts of edge emphasis are set by adjusting the gain control circuit 130 in such a manner that the amount emphasis of both edges will coincide (Column 9, Lines 12-28). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Sorimachi and Morgana by the teaching of Hieda in order to obtain the optimum amounts of edge of the image signal (Column 9, Lines 25-26).

Art Unit: 2612

Regarding claim 37, claim 37 is a method claim of apparatus claim 1. Therefore, see Examiner's comments regarding claim 1.

Regarding claim 73, Sorimachi discloses an image sensing apparatus (digital color copy machine, column 1, lines 13-39) comprising a signal processing apparatus of claim 1 (see discussion given in claim 1).

Regarding claim 76, all the limitations are contained in claim 1, except for the feature "computer usable medium having computer readable program code means", which is included in image processor of the digital image processor as shown figure 12, column 1, lines 13-18.

5. Claims 2 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sorimachi (US 5,331,442) in view of Morgana (US 6,377,711) and Hieda (US 5,471,241) further in view of Gu (US 5,874,988).

Regarding claims 2 and 8, Sorimachi, Morgana and Hieda fail to specifically disclose wherein said luminance edge enhancement means reduces the gain as the hue difference increase. However, Gu teaches a system and method for automated color correction, in which if the high edge of image is higher than reference (hue difference increase) system will reduce gain control parameter (Figures 9A-9B, Column 22, Lines 40-56). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Sorimachi and Hieda by the teaching of Gu in order to provide a system and method for automated color correction (Column 3, Lines 48-49).

Art Unit: 2612

***Allowable Subject Matter***

6. Claims 3-7, 39-43 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

See Examiner's comments reasons of allowable subject matter as indicated in Paper mailed on 08/12/2005.

***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUONG T. NGUYEN whose telephone number is (571) 272-7315. The examiner can normally be reached on 7:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NGOCYEN VU can be reached on (571) 272-7320. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LN  
02/05/06

**LUONG T. NGUYEN  
PATENT EXAMINER**